

AN
ACCIDENCE
OR
The Path-way to
EXPERIENCE.

Necessary for all Young Sea-men, or those
that are desirous to goe to Sea, briefly shewing
the Phrases, Offices, and Words of Command,
Belonging to the Building, Ridging, and Sayling,
a Man of Warre; And how to manage
a Fight at Sea.

Together with the Charge and Duty of
every Officer, and their Shares:

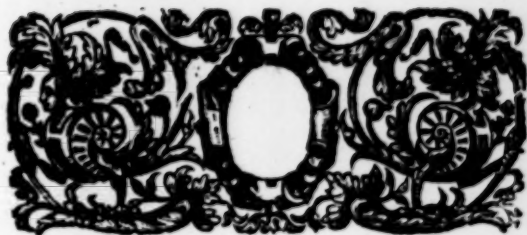
Also the Names, VVeight, Charge, Shot, and
Powder, of all sorts of great Ordnance.
with the use of the Petty Tally.

Written by Captaine IOHN SMITH some
times Governour of *Virginia*, and Admirall
of New ENGLAND.

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and are to be sold at the signe of the Talbot,
in Aldersgate Street. 1637.





TO ALL THE
RIGHT HONORABLE

And most Generous Lords in *England*,
and Others: Especially of his Majesties
Privy Councell, and Councell of Warre.



RIGHT HONORABLE:

In regard of the Present occasion, for the Arte of Navigation, and many young Gentlemen and Valiant spirits of all sorts, do desire to trye their Fortunes at sea: I haue beene perswaded to Print this discourse, being a subject I never see writ before. Not as an instructi-

The Epistle Dedicatory.

on to Marriners nor Sailors, whom
I intreate rather amend it, then con-
demne it, confessing it might be a
taske for a most excellent Sea-man ;
But as an intraduction for such as
wants experience, and are desirous
to learne what belongs to a Sea-
man ; for the advanſing of that in-
comparable faculty , seeing you are
in place, both of power and Autho-
ritie ; I most humblie present it to
Your Honors Considerations : No
more but ſacring all my best abil-
lities to the exquisite Iudgement, of
your renowned Vertues, I ever rest

Your Lordships ever most humbly devoted,

JOHN SMITH.



TO THE READER;

AND

ALL GENEROUS AND

Noble Adventurers by Sea;

And Well-Wishers to
NAVIGATION.

ESPECIALLY THE MASTERS,

Wardens, and Assistance of the
TRINITY-HOUSE.

Worthy Readers :



OW ever your perfecti-
ons may censure my im-
perfections, I know not,
my greatest error in this
is but a desire to do good,
which disease hath ever
haunted me since my
child-hood, and all the miseries and ingrati-
tudes I have indured, cannot yet diuert me from
that resolution : As both Europe, Asia, Affri-
ca,

To the Reader.

ca, and America can partly witnesse, if all their extremities hath taught me any thing, I haue not kept it for my owne particuler, I know well I am blamed for not concealing that, that time and occasion hath taught mee to reueale, as at large you may read in the life of Sigismundus Bathor Prince of Transilvania, writ by his Secretary Francilco Fernexsa. New Englands Trialls With the Generall History of Virginia, New England, and the Summer Isles, that the most of those faire plantations did spring from the fruites of my aduenturers and discoueries is euident, although their returnes as yet doth not answere the worlds expectation, nor my desire; yet how they haue proceeded euery yeare since their first originall, to this present, by the Maps therein, you may plainly see the Discriptions of the Countries by the Story, what they are, what good they might be to this Kingdome, how they haue bin vsed and abused, how the defects might be amended, the Plainters made happy, God and the King well pleased and serued, and all the Honorable and worthy Aduenturers contented: Whatsoeuer malice or ignorance can feigne to the contrary,
for

To the Reader.

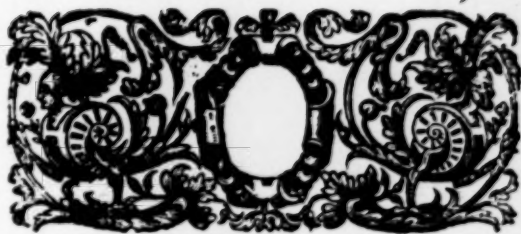
*for this small Pamphlet, if I find you kindly
and friendly accept it. I mean no
long, more largely to explain
the particulars: So I
rest,*

To Christ and my

Country a true Souldier,

and faithfull Servant,

John Smith.



An Accidence for
Young Sea-men:

OR,

Their Path-way to Experience.



HE *Captaines* charge is to commaund all, The Captains charge.
and tell the Maister
to what Port he will
go, or to what height,
In a fight he is to giue
direction for the ma-
naging thereof, and the Maister is to
see to the cunning the Ship, and trim-
ming

ming the sailes.

The Maister
and his Mates.

The *Maister* and his *Mate* is to direct the course, commaund all the Saylor, for steering, trimming and sayling the Ship, his Mates are onely his Seconds, allowed sometimes for the two Midships men, that ought to take charge of the first prize.

The Pilot.

The *Pilot* when they make land, doth take the charge of the Ship till he bring her to Harbour.

The Cape-
merchant and
Purser.

The *Cape merchant* and *Purser* hath the charge of all the Caragafoune or Merchandize, and the *Purser* doth keepe an Account of all that is receiued and deliuered, but a Man of Warre hath onely a *Purser*.

The Gunner
with his Mate,
and quarter
Gunner.

The Maister *Gunner* hath the charge of the Ordinances, Shot, Powder, Match, Ladles, Spunges, Cartrages, Armes and Fire-workes, and the rest e- uery one to receiue his charge from him according to directions, and to giue an account of his store.

The

For yong Sea-men.

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The *Carpenter* and his *Mate* is to haue the Nayles, Clinches, roue and clinch-nailes, spikes, plates, rudder-irons, called pintels and gudgions, pompe-nailes, skupper-nailes and leather, sawes, files, hatchets and such like, and euer ready for calking, breaming, stopping leakes, fishing or splicing the Masts or Yards, as occasion requi-
reth, and to giue an account of his store.

The Carpen-
ter and his
Mate.

The *Boteswaine* is to haue the charge of all the Cordage, tackling, failes, fids, and marling spikes, needles, twine, and saile-cloth, and rigging the shippe, his Mate the command of the long boate, for the setting forth of Anchors, way-
ing and fetching home an Anchor, warping, towing, and moreing, and to giue an account of his store.

The Bote-
swaine and
his Mate.

The *Chirurgion* is exempted from all duty but to attend the sicke, and cure the wounded, and good care Would be

The Chyrur-
gion and his
Mate.

B 2

had

had, he haue a certificate from the *Barber-surgions* Hall of his sufficiency, and also that his Chest bee well furnished both for *Physicke* and *Chyruigery*, and so neere as may bee proper for that clime you goe for, which neglect hath beene the losse of many a mans life.

The Marshall.

The *Marshall* is to punish offenders, and to see *Iustice* executed according to directions, as ducking at Yards arme, hawling vnder the Keele, bound to the Capsterne, or maine Mast with a basket of shot about his necke, setting in the bilbowes, and to pay the Cobty or the Morryoune. But the Boyes, the *Boteswaine* is to see euery Munday at the chist to say their Compasse, which done, they are to haue a quarter can, and a bisket of bread.

The Corporal.

The *Corporall* is to see the setting and releeuing the watch, and see all the souldiers and saylors keepe their Armes cleane, neate and yare, and teach them their vse.

The

For yong Sea-men.

The *Steward* is to deliuer out the victuall, according to the Captaines directions, and messe them 4, 5, or 6, as there is occasion.

The Steward
and his Mate.

The *quarter Maisters* hath the charge of the hold for stowage, rommaging, and trimming the thippe, and of their squadrons for their Watch, a Sayne, a Fisgigg, a Harping iron, Fish-hookes, for Porgos, Bonetos, or Dorados, &c. and rayling lines for Mackerell.

The quarter
Maisters.

The *Cowper* is to looke to the caske, hoopes and twigges, to staue or repaire the buckets, Baricoes, Cans, steeptubs, runlets, hogsheds, pipes, buts, &c. for wine, beere, syder, beuerage, fresh water, or any liquor.

The Cowper
and his Mate.

The *Coxswaine* is to haue a choyce to attend the Skiffe to go to and againe as occasion commandeth.

The Cox-
swaine and his
Mate.

The *Cooke* is to dresse and deliuer out the Victuall, he hath his store of quarter cans, small cannes, platters, spoones, lanthornes, &c. and is to giue

The Cooke
and his Mate.

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his account of the remainder.

The *Swabber*.

The *Swabber* is to wash and keepe cleane the ship and maps.

The *Lyer*.

The *Lyer* is to holde his place but for a weeke, and hee that is first taken with a *lye*, euery Monday is so proclaimed at the maine Mast by a generall cry, *A lyer, a lyer, a lyer*, he is vnder the *Swabber*, and onely to keepe cleane the beake-head and chaines.

The *Saylors*.

The *Saylors* are the antiient men for hoyfing the sailes, getting the tackes aboard, hawling the Bow-lines, and steering the ship.

The *Yonkers*.

The *Yonkers* are the yong men called *Fore-mast men*, to take in the Top-sayles, or Top and yeard, Furle, and Sling the maine Saile, Boufing or Tryfing, and take their turne at Helme.

The *Lieutenant*.

The *Lieutenant* is to associate the Captaine, and in his absence to execute his place, he is to see the Marshall and Corporall doe their duties, and assist them in instructing the Souldiers, and
in

For yong Sea-men. 7

in a fight the Forecastle is his place, to make good, as the Captaine doth the halfe decke, and the quarter Maisters, and mid-ships men, but in the *States* men of Warre he is allowed as necessary as a Lieutenent on shore.

When you set sayle and put to sea, How to deuide the Company. the Captaine is to call vp the company, and the one halfe to goe to the Starreboord, the other to the Larboord, as they are chosen, the Maister chusing first one, then his mate another, and so forward till they bee deuided in two parts, then each man is to chuse his Mate, Consort, or Comrado, then deuide them into squadrons according to your numbers and burthen of your ship: but care would be had, that there be not two *Comorados* vpon one watch, because they may haue the more roome in their Cabons to rest.

To giue a true *Arithmetical* and *Geometrical* proportion for the building of ships, were they all built after one mould,

mould, as also of their Yeards, Mafts, Cables, Cordage and Sayles, were all the stuffe of like goodnesse, a methodicall rule might bee Projected, but it would bee too curious for this Discourse, and as much too troublesome either for the Reader or Author, but the principall names of the timbers about the building of a ship, according to his vnderstanding followeth, and how being framed they are fixed.

The Principall
names of the
timbers about
the building
a ship.

First lay the Keele, the Stemme, and Starne, in a dry docke, or vppon the stockes, and binde them with good knees, then lay all the Flore timbers, and cut your Limber holes about the keele, to bring the water to the well for the pumpe. Next your Nauell timbers, and bind them all with fixe foote Skarfe at the least, the Garbell strake is the outside plancke next the keele, be sure you haue a good sufficient Kelson, and then plancke your ourside and inside vp, with your Top timbers, but the
lengths,

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lengthes, breadthes, depthes, rakes and burdens are so variable and different, that nothing but experience can possibly teach it.

A Shippe of 400, Tunnes requires a planke of foure inches, 300. Tunnes three inch, small Ships two inch, but none lesse. For clamps, middle bands and sleepers, they be all of 6. inch planke for binding within. The rest for the sparring vp of the workes of square 3. inch planke; Lay the beames of the Orlope, if she be 400. Tunnes at ten foote deepe in howle, and all the beames to be bound with two knees at each ende, and a stardard knee at euery beames end vpon the Orlope, all the Orlope to be layd with square three itch plancke, and all the planckes to be treenailed to the beames.

Notes for a
Covenant be-
tweene the
Carpenter
and the Ow-
ner.

Sixe foote would bee betweene the beames of the Decke and Orlope, and ten ports on each side vpon the lower Orlope, all the binding betweene them

C should

should be with three inch, or two inch plancke, and the vpper Decke should be layd with so many beames as are fitting with knees to bind them; laying that Decke with spruce deale of 30. foot long, the sap cut off, and two inches thicke, for it is better then any other.

Then for the *Captaines* Cabben or great Cabben, the stearage, the halfe Decke, the round house, the Fore-castle and to binde an ende with a Capsterne and all things fitting for the Sea, the *Smiths* worke, the caruing, ioyning, and painting excepted, are the principall things I remember to be obserued, for a *Charter-party* betwixt the *Merchants*, the *Maister* and the *Owner*, you haue Presidents of all sorts in most *Scriveners* shops.

Generall sea
termes belong-
ing to ships.

A dry Docke, the stockes, the keele, the steme, the sterne, the starne-post, the flowre, the sleepers, rising timbers, garble strake, her rake, the fore reach, planks, bindings, knees, boults, trunions,

ons, brasers, riders, the Orlope, the ports, the bend, the bowe, the hawse, the hawses, the decke, the partners, a flush decke, fore and aft, the ram heads, the Knights, a halfe decke, a quarter decke, the bulke, the bulkes head, the skuttle, the hatches, the hatches way, the holes in the commings, pitch, tarre, rosen, okum, calking. In the stearage roome, the whip, the bittakell, the trauas board, the Compasse, the Fly, the needle, the lanthorne, the socket. About the Gun-roome, the Tiller, the rudder, the pintels, the gudgions, the bread-roome, the ships runne. The powder-roome, the Stewards roome, the cooke roome, the great cabbon, the gallery, a cabben, a hanging cabben, a Hamacke, the lockers, the round-house, the counter, the wayft, the wayft-boards, the gunwayle, stations for the nettings, a chaine through the stations, or brest-ropes.

The Pumpe, the pumpes well, the What belongs
to the Pumpe.
C 2 pumpes

pumpes brake, the pumpes can, the pumpes chaine, the spindle, the boxe, the clap, the pompe is choaked, the pompe suckes, the ship is stanche.

What belongs
to the fore
cable.

The forecastle, or prow, the beake-head, the bits, the fish-hooke, a louse hooke, and the blot at the *Dauids* ende, the Cat, Cats head and Cats holes, the ships draught.

The Masts,
Caps and
Yards.

The boule spret, the pillow, the stur-rop, the spret sayle, the spret sayle yeard, the spret sayle top mast; the spret sayle top sayle yard, the foremast, the fore yard, the fore top, the fore top mast, the fore top sayle yard, the fore top gallant mast, the fore top gallant sayle yeard, coates and wouldings for all masts and yeards, Grummets and staples for all yeards. The trussell trees or crosse trees, the maine mast, the step in the kelson, where it puts its heele, as doth also the fore mast, the maine yard, the maine top, the maine top mast, the maine top sayle yeard, the top gallant mast,

maſt, the maine top gallant ſayle yeard,
the truck, or flagge ſtaffe. The miſen,
the miſen yeard, the miſen top maſt,
the miſen top ſayle yeard, in great ſhips
they haue two miſens, the latter is cal-
led the *boneauentuer* miſen, then the
poope, Lanthorne and flagge ſtaffe:
when a maſt is borne by the boord,
they make a lury-maſt, which is made
with yards, routtrees, or what they can,
ſplited or fiſhed together.

The Capſterne, the pawle, the
whelps, the capſterne bars, a leare cap-
ſterne is onely in great ſhips to hoyle
their ſayles, the canhookes, ſlings and
parbunkels, ports and ringbolts and
hooks, the ſkupper, the ſkupper holes,
the chaines, the ſteepe tubs, an entring
ladder or cleats, a boy, a can boy, a ſhip
cranke ſided, Iron ſicke, ſpewes her
okum, a leake ſhip, the ſheathing, fur-
ring, carrying, walſhing and breaming,
lanching, caruing, guilding and pain-
ting a ſhip, ballaſt, kintlage, canting

The capſterne
and other ge-
nerall phraſes.

coynes, standing coynes, rouse trees, a grating, netting or false decke for your close fights.

The ropes
names in a
ship.

The entring rope, the boate rope, the bucket rope, the boy rope, guest rope, the cat rope, the port ropes, the keele rope, the rudder rope, the top ropes, the bolt ropes, the brest ropes are now out of vse, the water line is.

Concerning
the tackling
and rigging
a ship.

The tacklings are the fore stay, the maine stay. The tackles, the mison stay, the collers, the maine shrouds and chaines, the maine top shroudes, the fore shroud, the fore top shroud, the swifsters, the mison shroudes, the mison top shroudes, and their ratlings, and the pannels to all masts, the maine hallyards, the maine top sayle hallyards, the top gallant saile hallyards, the fore hallyards, the fore top sayle hallyard, the mison hallyard, and the spret sayle hallyard, the horse, the maine sheats, the maine top sayle sheats, the maine braces, the maine top sayle braces,

For yong Sea-men. 15

braces, the maine bowling and bridles, the maine top sayle bowlin, the bunt lines, the trusses, the lifts, the carring, the cat harpings; a leare, leatch lines; the Robins, garnit, Clow garnits, ryes, martlits, the most of all these are also belonging to the fore-mast, misen and bowlelpret, and hath the same denomination after their masts, only the bowlelpret hath no bowlines, and the misen sheats, are called the starne sheats, they haue all of them pullies, blockes, shiuers and dead mens eyes, Lanyards, caskets and crowes fecte. A snap blocke is seldom vsed but in heauing of goods and ordinances.

There is also diuerse other small cordage, as head lines, the knaulings gassits or furling lines, marlines, rop yearne, Caburne, Sinnet, paunches and such like.

The Cables, hawfers or streame cables, are most vsed in the water by the Anchors, when they are too short, they

they shoote one into another when they are galled or breake, they splice them, when that way vnseruiceable, they serue for Iunkes, fendors and braded plackets for breasts of defence, and then as the rest of the ouerworne tackling: for rope yarne, caburne, sinnit an okum, sheeps feet is a stay in setting a top mast, and a guie in staying the tackles when they are charged with goods.

Termes for
the Anchors,

The Anchor hath a stocke, a ring, a shanke, a flouke, the greatest in euery ship is called the sheat Anchor, the rest Anchors, a streame Anchor, graplings or kedgers, bend your cables to your Anchors.

The names of
the sailes.

The maine sayle, the fore sayle called sometimes the fore course, the maine course or a paire of courses, each of them hath a bonnet and a drabler, the maine top sayle, the top gallant sayle, and in a faire gaile your studding sayles, then your mison, your misen
top

for yong Sea-men. 17

top sayle, your spret sayle, and spret sayle top sayle, a drift sayle, a crofiack, a netting sayle, twyne, a munke seame, a round seame, a suite of sayles, a shift of sayles, top Armour, wayst clothes, pendants and colours.

A channell, a bay, a rode, a sound, an offen, a coue, a crike, a riuer, cleere ground, very fast ground, or good anchoring, foule ground, osie ground, sandy ground, clay ground, a headland; a furland, a ketch; a land marke.

A calme, a brese, a fresh gaile, a pleasant gayle, a stiffe gayle, it ouerblowes, a gult, a storme, a spoute, a loume gaile, an eddy wind, a flake of wind, a Turnado, a mouth soune, a Herycano.

A calme sea, becalmed, a rough sea, an ouergrowne sea, the rut of the sea, roaring of the sea, it flowes, quarter flood, high water, or a still water, a full sea, a spring tide, ebbe, a quarter ebbe, halfe ebbe, three quarters ebbe, a lowe water, a dead low water, a nepe tide, a

D shoule,

The tearmes for the harbor.

For the winds.

Tearmes for the sea.

shoule, a ledge of rockes, a breach, a shallow water, deepe water, soundings, tadome by the marke, 3. o.d. and a shaftment left. 4. o.d. disimboage, a gulph, the froth of the sea.

Termes for
steering.

Starbord is the right hand, Larbord is the left, starboord the helme, right your helme a loufe, keepe your loufe, come no neere, keepe full, stidy, so you goe well, port, warre, no more; beare vp the helme, goe rofmy, beyare at the helme, a fresh man at the helme.

Termes of
Warre.

A sayle, how stands she, to windward or leyward, set him by the Compasse, he stands right a head; or on the weather bow, or ley bow, out with all your sayles, a stydy man to the helme, sit close to keep her stydie. Giue chase or fetch him vp, he holds his owne, now we gather on him, out goeth his flag and pendance or streames, also his Colours, his walt-clothes and top armings, he furles and slings his maine saile, in goes his spret sayle and misen, he makes ready

For yong Sea-men. 19

dy his close fights fore and after ; well,
we shall reach him by and by . What
is all ready ? Yea, yea. Euery man to his
charge, Dowse your top sayle, salute
him for the sea ; Hale him : whence
your ship, of *Spayne*, whence is yours,
of *England*, are you Merchants or Men
of Warre, We are of the Sea. Heway! vs
to leeward for the King of *Spaine*,
and keepes his loufe. Giue him a chafe
peece, A broad side, and runne a head,
make ready to tacke about, giue him
your sterne peeces, be yare at helme,
hale him with a noyse of Trumpets.
We are shot through and through, and
betweene winde and water, trye the
pumpe. Maister let vs breathe and re-
fresh a little, sling a man ouer-boord to
stop the leake, done, done, is all ready
again, Yea, yea: beare vp close with
him, with all your great and small
shot charge him ; Boord him on his
wether quarter, lash fast your graplins
and sheare off, then runne stemlins the

mid ships. Boord and boord, or thwart
 the hawse; we are foule on each other.
 The ships on fire; Cut any thing to get
 cleere, and smother the fire with wet
 clothes, We are cleere, and the fire is
 out, God be thanked. The day is spent,
 let vs consult. Surgion looke to the
 wounded, wind vp the slaine, with
 each a waight or bullet at his head and
 feete, giue three peeces for their fune-
 rals. Swabber make cleane the shippe.
 Purser record their names; Watch bee
 vigilant to keepe your berth to wind-
 ward: and that wee loose him not in
 the night. Gunners spunge your Or-
 dinances; Souldiers skower your pee-
 ces; Carpenters about your leakes.
 Boteson and the rest, repaire the sayles
 and shroudes. Cooke see you obserue
 your directions against the morning
 watch. Boy, Holla Maister, Holla, Is
 the kettle boyled, yea, yea, Boteswaine,
 call vp the men to Prayer and Break-
 fast.

Boy

For yong Sea-men. . 25

Boy fetch my celler of Bottles , a
health to you all fore and afte, courage
my hearts for a fresh charge : Maifter
lay him a bord loufe for loufe ; Mid-
fhips men fee the tops and yeards well
maned with ftones and brasse-bals , to
enter them in the fhronds , and every
fquadron elfe at their beft aduantage,
found Drums and Trumpets , and St.
George for England

They hang out a flag of trufe, ftand
in with him , hale him a mayne, a bale
or take in his flagge , ftrike their fayles
and come aboard , with the Captaine,
Purfer, and Gunner , with your Com-
miffion, Cocket, or bills of loading :
out goes their Boate , they are lanced
from the Ship fide , Entertayne them
with a generall cry , God faue the Cap-
taine, and all the Company , with the
Trumpets founding , examine them
in particuler , and then conclude your
conditions with feafting, freedome, or
punifhment , as you finde occafion ;

D 3 other.

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other wayes if you surprize him or enter perforce, you may stow the men, rifle, pillage, or sacke, and crye a prize.

To call a Councell in a Fleete: there is the Councell of Warre, and the common Councell, which hangs their flags out in the mayne shrouds, or the mizen.

Nor betweene two Navies they use often, especially in a Harbour or rode, where they are at anchor, to fill olde Barkes with pitch, tar, trayne oyle, liffed oyle, brimstone, rosen, reedes, and dry wood and futets combustable things, sometimes they linke three or foure together, towed together in the night, and put a drift as they finde occasion. To passe a Fort, some will make both shippe and sayles all blacke, but if the Fort keepe but a fire on the other side, and all their peeces poynt blanke with the fire, if they discharge, what is betwixt them and the fire, the shot will
hit,

hit, if the rule be truly observed. To conclude, there is as many stratagims, advantages, and inventions to be vſed, as you finde occasions, and therefore experiences muſt be the beſt Tutor.

Bend your paſſerado to the mayne ſayle, git the ſailes to the yeards, about your gear on all hands, hoyle your ſayles, halfe maſt high, make ready to ſet ſayle, croſſe your yeards, bring your Cable to the capſterne. Boatswaine fetch an Anchor aboard, break ground, or way Anchor, heaue a head, men into the tops, men vpon the yeards, come iſt the Anchor a pike, heaue out your top ſayles, haule your ſheates; What's the Anchor away, yea, yea; Let fall your fore ſayle, whoſe at the helme there, coyle your cable in ſmall ſlakes, hawle the cat, a bitter, belay, louſe, faſt your Anchor with your ſhanke painter, ſtow the boate, Let ſayle your maine ſaile, on with your bonnets and drablers, ſteare ſtudy before the wind.

The

Concerning
laying, or working
of a Ship.

The wind veares, git your star-boord
 tacks aboard, hawle off your ley sheats,
 ouerhawle the ley bowlin, ease your
 mayne brases, out with your spret-saile,
 flat the fore sheat, pike vp the misen or
 brade it, The ship will not wayer, loure
 the maine top saile, veare a fadome of
 your sheat, a flown sheate, a faire winde
 and a boune voyage, the wind shrinks,
 get your tacks close aboard, make rea-
 dy your loufe howks and ley fagnes, to
 take off your bonnits and drablers,
 hawle close your maine bowline: It
 ouercasts, we shall haue winde, fattle
 your top sailes, take in the spret sayle, in
 with your top sayles, lower your maine
 sayles, tallow vnder the parrels, in with
 your maine sayle, lower the fore sayle,
 the sayle is split, brade vp close all your
 sayles, lash sure the Ordinances, strike
 your top masts to the cap, make sure
 your sheepes feete, a storme, hull,
 lash sure the helme a ley, lye to try our
 drift, how capes the ship, cun the ship,
 spounce

spoune before the winde, she lusts, she
lyes vnder the Sea, trie her with a crosse-
jacke, bowse it vp with the out. log.
ker, she will founder in the Sea, runne
on shore, split or billage on a Rocke, a
wracke, put out a goose. winge, or a
hullocke of a sayle, faire weather, set
your fore sayle. Out with all your sailes,
get your Larbord tackes aboard, hawle
off your Starboord sheats, goe large,
laske, ware yawning, the ships at
stayes, at backe. stayes, ouer. set the
ship, flat about, handle your Sayles,
or trim your sayles, let rise your tacks,
hawle of your sheats. Rocke. weede, a-
drift, or flotes,) one to the top to looke
out for Land, a ships wake, the water
way, the weather bow, weather coyle,
lay the ship by the Ley, and heaue the
lead, try the dipsie line, bring the ship
to rights, fetch the log. line to try what
way shee makes, turne vp the minute
glasse, obserue the hight, Land, to make
Land, how beares it, set it by the Com-
E passe,

passe, cleare your leach-lines, beare in,
 beare off, or stand off, or sheare off,
 beare vp, outward bound, home-ward
 bound, shorten your Sailes, take in
 your Sailes, come to an Anchor vn-
 der the Ley of the weather shore, the
 Ley shore, nealed too, looke to your
 stops, your Anchor comes home, the
 ships a drift, vere out more Cable, let
 fall your sheat Anchor, land-locked
 more the ship, a good Voyage, Armes,
 arme, a skiffe, a frigot, a pinnace, a
 ship, a squadron, a fleete, when you
 ride amongst many ships, pike your
 yards.

The termes
 of the boate.

To the boate or skiffe belongs oares,
 a mast, a saile, a stay, a halyard, sheats,
 a boat-hook, thoughts, thoules, rudder,
 irons, bailes, a trar-pawling; or yaw-
 ning, carlings, carling-knees for the
Dauid, the boates-wayles, a dridge, to
 row, a spell, hold-water, trim the boate
vea, vea, vea, vea, vea, who fies Amen,
 one and all, for a dram of the bottle.

A

For yong Sea-men. 31

A Basillisco, double Cannon, Cannon Pedrea, demy Cannon, Culvering, Sakar, Minion, Falcon, Falconet, Rabbenet, Murderers, slings, Chambers, Curriers, Hargabusacrock, Musquets, bastard Musquets, Coliners, Carbines, Crabuts, long Pistols, short Pistols, Charges, Cartrages, Match, Spunges, Ladles, Rammers, Rammers heads, tomkins, a worme, a bore, a barrell, taper bore, hunicomed, lintstockes, carrages, trukes, linch-pins, trunions, axell-trees, beds, coynings, the peece in the prow, the chase peece in the sterne, the quarter peece, the mid-ships, the vpper tyre, the middle tyre, the lower tyre, their fids and leads to keepe dry the touch hole: Trauers a peece, dispect a peece, compasse Calipers, a gunners quadrant, a hand spike, a crow of iron, to mount a peece, to dismount a peece, a darke Lanthorne, a budge barrell, a horne, a priming iron: wyer, round-shot, crosse-barre.

The names of
all sorts of
great Ordnance and pee-
ces, and their
appurtenances.

barre-shot, chayne-shot, langrill shot, a case, case-shot, lead, melting ladles, moulds, bullet bagges, Musquet shot, Colyuer shot, quartred shot, Pistol shot, poysoned bullets, brasse bals, iron bals, granadoes, trunckes of wilde fire, pikes of wild fire, arrowes of wild fire, pots of wild fire, or dragouns: To cloye a peece: To loade a peece: To poyson a peece, hookes for gunner or tacklings.

Concerning
the shooting of
great Ordnance.

Concerning the particuler theormes, or tearmes for great Ordnances, as the concaue, truncke, cylinder, the soule or bore of a peece: To know whether she be equally bored, camber, taper, or belbored, the severall names of her mettle, the thinnesse and thicknesse, her carnooze, or base ring at her britch, her shaft or chafe, her trunnions, mousell-rings at her mouth, to dispart her, know her leuell poynt blanke and best at randome, her fortification, the differences of powder, be it serpentine or corned powder, if she be well moun-
red

ted, vppon a leuell plot-forme or no, besides there are so many vncertaine accidents, both in the peece, shot, and powder, the ground, the ayre and differences in proportion, they can no certaine artificiall rules be proscribed. Those proportions following are neere the matter, but for your better satisfaction, read Mr. *Digs* his *Pantrymetria*, Mr. *Smith*, or Mr. *Burnes* Arte of gunry, or Mr. *Robert Nortons* expositions vpon maister *Digs*, any of these will shew you the Theoricke; but to be a good Gunner, you must learne it by practise. The Gunners scale is made in brasse at Tower Hill, with prospectiue glasses, and many other instruments by Mr. *Bates*.

A Table of Proportions for the use of great Ordnance.	The weight of the Pieces in pounds.	The weight of the shot in pounds.	The Circumference of the shot in inches.	The height of the shot in inches.	The length of the Ladle in inches.	The breadth of the Ladle in inches.	The weight of the powder in pounds.	The Stores of powder in blank.
<i>A Cannon.</i>	8000	63	$24\frac{1}{2}$	$7\frac{1}{2}$	23	15	46	26
<i>Demy Cannon.</i>	6000	33	$18\frac{1}{4}$	6	$22\frac{1}{2}$	$11\frac{1}{2}$	24	30
<i>A Culvering.</i>	5500	18	$15\frac{1}{2}$	5	22	9	14	33
<i>Demy Culvering.</i>	4500	9	$12\frac{1}{2}$	4	20	8	9	39
<i>A Saker.</i>	3500	$5\frac{1}{4}$	$10\frac{3}{4}$	$3\frac{1}{2}$	$16\frac{1}{2}$	$6\frac{1}{2}$	$5\frac{1}{2}$	26
<i>A Minion.</i>	1500	4	$9\frac{1}{2}$	3	15	6	4	25
<i>A Falcon.</i>	1100	$3\frac{1}{4}$	$7\frac{1}{2}$	$2\frac{1}{2}$	$12\frac{1}{2}$	5	$3\frac{1}{4}$	14
<i>A Falconet.</i>	500	$1\frac{1}{4}$	$6\frac{1}{2}$	2	10	4	$1\frac{1}{4}$	8

Note that feldome in any Ships they use any Ordnance greater then a demy Cannon.

The

For yong Sea-men: 35

The Ship hath one third part; the Victuler the other third; the other third part is for the Company, and this is subdivided thus.

How they divide their shares in a Man " of Warre.

Shares.

The Captaine hath _____ 9.

The Master hath _____ 7.

The Mates hath _____ 5.

The Gunners hath _____ 5.

The Carpenter hath _____ 5.

The Boteswaine hath _____ 4.

The Marshall hath _____ 4.

The Corporall hath _____ 3.

The Chyrurgion hath _____ 3.

The quarter Masters hath _____ 4.

The Steward hath _____ 3.

The Cooke hath _____ 3.

The Coxon hath _____ 3.

The Trumpeter hath _____ 4.

The Sailers, two or one and a halfe.

The Boyes a single share.

The Leinutenant what the Captaine will give him, or as they can agree.

They

They vse to appoint a certaine reward extraordinary to him that first discries a Sayle if they take her, and to him that first enters her.

For to learne to obserue the Altitude, Latitude, Longitude, Amplitude, the variation of the Compasse, the Sunnes Azimuth and Almicanter, to shift the Sunne and Moone, and to know the tydes, your roomes, pricke your card, and say your Compasse, get some of those bookes, but practise is the best.

Mr. Wrights *errors of Nauigation.*

Mr. Taps *Sea-mans Kallender.*

The Art of Nauigation.

The Sea Regiment.

The Sea-mans secrets.

Wagganour.

Mr. Gunters *workes.*

The Sea-mans glasse for the skale.

The new auracter for variation.

Mr. Wright *for the vse of the Globe.*

Mr. Hewes *for the same.*

Good

Good Sea Cards.

Two paire of Compasses.

An Astralobe quadrant.

A Crosse Staffe.

A backe Staffe.

An Astrolobe.

An Nocturnall.

If you haue a Divine, his pay is most commonly both from the Aduenturers and the Saylors, so also is the Chyrurgion.

Young Gentlemen that desires commaund ought well to consider, the condition of his ship, victuall, and Company; for if there be more learners then Saylers, how sleightly focuer many esteeme Saylers, all the worke to saue Ship, goods, and liues, must lye vpon them, especially in foule weather, the labour, hazard, wet and cold is so incredible I cannot expresse it. It is not then the number of them that here will say at home, what I cannot

Adverti-
ments for yong
Commanders,
Captains and
Officers.

doe, I can quickly learne, and what a great matter it is to sayle a Ship, or goe to Sea, surely those for a good time will doe most trouble then good, I confesse it is more necessary such should go, but not too many in one ship, for if the labour of sixty should lye vppon thirty, as many times it doth; they are so ouer-charged with labour, bruises, and ouer-strayning themselues, for there is no dallying nor excuses, with stormes, gusts, over growne seas, and ley shores; they fall sicke of one disease or other, and then if their Victuals be putrified, it indangers all. Men of all other professions in lightning, thunder, stormes and tempests, with raine, and snow, may shelter themselues in dry houses, by good fires, and good cheare; but those are the chiefe times, that Sea-men must stand to their tacklings, and attend with all diligence their greatest labour vpon the Deckes: Many supposeth any thing is good enough

nough to serue men at sea, and yet nothing sufficient for them a shore, either for their healthes, for their ease, or estates, or state. A Commaunder at sea should do well to thinke the contrary, and prouide for himselfe and company in like manner; also seriously to consider what will be his charge, to furnish himselfe at sea, with bedding, linnen, armes and apparell; how to keepe his table aboard, his expences on shore, and his petty tally, which is a competent proportion according to your number, of these particulars following.

Fine wheat flower, close and well packed, Rife, Currands, Sugar, Prunes, Cinamon, Ginger, Pepper, Cloues, Greene-ginger, Oyle, Butter, Olde Cheese, or Holland, Wine vinegar, Canary Sacke, Aqua vite, the best Wines, the best Waters, the iuyce of Lemons for the Scuruey, white Bisket, Oate-meale, Gammons of Bakon, dried neates tongues, Rosted Beefe, packed vp in vineger.

F 2

Legges

Legges of Mutton minced and stewed and close packed vp with butter in earthen pots.

To entertaine strangers, *Marmelet, Suckets, Almonds, Comfits*, and such like.

Some it may bee will say, I would haue men rather to feast then fight. But I say the want of those necessaries, occasions the losse of more men, then in any *English* fleet hath bin slaine in any fight since 88. for when a man is ill sicke, or at the poynt of death, I would know whether a dish of buttered Rice, with a little Cinamon and Sugar, a little minced meate, or roast beefe, a few stewed Prunes, a race of greene ginger, a flap-Iacke, a Can of fresh water brued with a little Cinamon, Ginger and Sugar, be not better then a little poore *Iohn*, or salt fish, with oyle and mustard, or bisket, butter, cheefe or oatemeale pottage on fish dayes, salt beefe, porke and pease and sixe shillings beere, this is your ordinary ships allowance, and good for them

them are well, if well conditioned, which is not alwayes, as sea-men can too well witnesse: and after a storme, when poore men are all wet, and some not so much a cloth to shift him, shaking with cold, few of those but will tell you, a little Sacke or Aquavitz, is much better to keepe them in health, then a little small beere or cold water, although it be sweete, now that euery one should provide those things for himselfe, few of them haue either that prouidence or meanes. And there is neither Alehouse, Tauerne, nor Inne to burne a fagot in, neither Grocer, Poulterie, Apothocary, nor Butchers shop: and therefore the vse of this petty rally is necessary, and thus to be employed as there is occasion, to entertaine strangers as they are in quality, euery Commander should shewe himselfe as like himselfe as he can, as well for the credit of the ship and his settors forth as himselfe, but in that heerein euery one

F 3

may

• •

may moderate themselves according to their owne pleasures, therefore I leaue it to their owne discretions. And this brieue Discourse, and my selfe, to their friendly construction and good opinion.

JOHN SMITH *Writ this with his
owne Hand.*

FINIS.

Errata.

P. Ag. 4. l. 19. for a basket reade basket. p. 5. l. 18. for gang reade a choyce gang. p. 7. l. 4. for midships men, r. midships, p. 12. l. 7. for the blot, r. blocke, p. 15. l. 5. for clow, r. clew, p. 17. l. 12. for hetch r. reach, *ibid.* l. 19. for mouthfoune, r. mounthfoune, p. 18. l. 1. for edde r. o - e, p. 26. l. 10. for mor r. Nor, *ibid.* l. 15. for lucers r. luch, p. 28. l. 22. make them sure with your sheepsfeet, p. 30. l. 8. r. stoppers for stops. p. 31. l. 19. for dispeſt r. dilpeart, p. 32. l. 20. for gunners r. gunners.